

ONS00507
10/797,537Amendments to the Specification

Please add the following replacement paragraphs for paragraphs [0028] and [0029]:

[0028] During operation a gate bias V_g is applied to gate electrode 51 and a drain voltage V_d is applied to drain electrode 66 while the source electrode is grounded. When the gate bias V_g exceeds the threshold voltages of device 10 (i.e., gate voltages necessary to form channel regions 47, 57, 571, 572, 573, and 58), current components I_1 , I_2 , I_3 , and I_4 flow between source region 43 and trench drain region 36.

[0029] One advantage of the present invention is that n-type regions 16, 18, and 21 provide additional low resistance paths or drift regions for current to flow, which reduces on resistance R_{ON} , without increasing the area of device 10. This reduces $R_{ON} \times \text{Area}$ without detrimentally impacting the blocking voltage of device 10 or increasing die or chip size. When under a positive gate bias, gate trench portion 47 causes electrons to accumulate at the interface between layers 16, 18, and 21 and gate trench portion 46 47 thereby further reducing the resistance in the areas.